

Attachment  
Page No 13

(Modified) PTO/SB/08A-B (10-96)  
Approved for use through 10/31/99. OMB 0651-0031

Substitute for form 1449A-B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)	Complete if Known	
	Application Number	09/495,668
	Filing Date	February 1, 2000
	First Named Inventor	Serg y A. Selifon v
	Group Art Unit	1631
	Examiner Name	Kim, Y.
	Attorney Docket Number	02-109510US

RECEIVED

JUL 10 2001

TECH CENTER 1600/2900

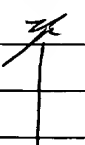
U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
	AA	09/408,392		Cramer et al.	09-28-1999	
	AB	09/408,393		Welch et al.	09-29-1999	
	AC	09/416,375		Selifonov et al.	10-12-1999	
	AD	09/484,850		Cameri et al.	01-18-2000	
	AE	09/539,486		Selifonov et al.	03-30-2000	
	AF	09/618,579		Selifonov et al.	07-18-2000	
	AG	09/626,588		Cameri et al.	07-27-2000	
	AH	09/626,595		Cameri et al.	07-27-2000	
	AI	09/626,601		Cameri et al.	07-27-2000	
	AJ	09/626,929		Cameri et al.	07-27-2000	
	AK	09/626,930		Cameri et al.	07-27-2000	
	AL	09/694,863		Cameri et al.	07-27-2000	
	AM	09/694,864		Cameri et al.	07-27-2000	
	AN	09/718,682		Selifonov et al.	11-21-2000	
	AO	09/718,765		Selifonov et al.	11-21-2000	
	AP	09/718,849		Selifonov et al.	11-21-2000	
	AQ	09/721,365		Selifonov et al.	11-21-2000	
	AR	09/721,395		Selifonov et al.	11-21-2000	
	AS	09/721,396		Selifonov et al.	11-21-2000	
	AT	09/721,598		Selifonov et al.	11-21-2000	
	AU	09/721,601		Cameri et al.	11-21-2000	
4/2	AV	4,959,312		Sirokin	09-25-1990	
4/2	AW	4,994,379		Chang	02-19-1991	
4/2	AX	5,043,272		Hartly et al.	08-27-1991	
4/2	AY	5,066,584		Gyllensten et al.	11-19-1991	
4/2	AZ	5,264,563		Huse	11-23-1993	
4/2	BA	5,319,308		Dechene	06-07-1994	
Examiner Signature					Date Considered	4-29-03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute for form 1449A-B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Complete if Known	
	Application Number	09/495,668
	Filing Date	February 1, 2000
	First Named Inventor	Sergey A. Selif n v
	Group Art Unit	1631
	Examiner Name	Kim, Y.
	Attorney Docket Number	02-109510US

RECEIVED  
JUL 10 2001  
TECH CENTER 1600/2900

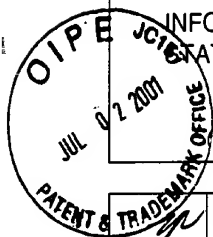
BB	5,408,181	Dechene	04-18-1995
BC	5,447,839	Manos et al.	09-05-1995
BD	5,509,793	Stemmer	04-09-1996
BE	5,519,319	Smith	05-21-1996
BF	5,521,077	Kholsa et al.	05-28-1996
BG	5,565,350	Kmiec	10-15-1996
BH	5,580,730	Okamoto	12-03-1996
BI	5,612,205	Kay et al.	03-18-1997
BJ	5,650,722	Smith	07-22-1997
BK	5,675,253	Smith	10-07-1997
BL	5,717,085	Little et al.	02-10-1998
BM	5,760,012	Kmiec et al.	06-02-1998
BN	5,789,577	Geysen	08-04-1998
BO	5,869,644	Shortle et al.	02-09-1999
BP	5,912,119	Radman et al.	06-15-1999
BQ	6,153,410	Arnold et al.	11-28-2000
BR	6,159,690	Borrebaeck et al.	12-12-2000

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
	BS	WO	00/00632		Phylos, Inc.	01-06-2000		
	BT	WO	92/06176		Ixsys, Inc	04-16-1992		
	BU	WO	97/33957		Amway Corporation	09-18-1997		
	BV	WO	97/35966		Maxygen, Inc	10-02-1997		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
BW		ALEXEEV ET AL. "Stable and Inheritable changes in genotype and phenotype of albino melanocytes induced by an RNA-DNA oligonucleotide." <i>Nature Biotechnology</i> 1343-1346 (1998)	

Examiner Signature	Date Considered	4-29-03
-----------------------	--------------------	---------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



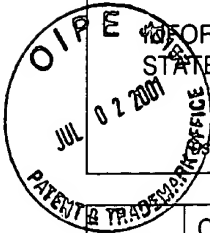
Substitute for form 1449A-B/PTO  INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use as many sheets as necessary)	Complete if Known	
	Application Number	09/495,668
	Filing Date	February 1, 2000
	First Named Inventor	Stacy A. Selifon v
	Group Art Unit	1631
	Examiner Name	Kim, Y.
	Attorney Docket Number	02-109510US

<input checked="" type="checkbox"/>	BX	ALBERTS ET AL. "Recombinant DNA Technology." <i>New York Publishing, Inc.</i> 291-312 (1994)	
<input checked="" type="checkbox"/>	BY	ARKIN "Optimizing Nucleotide Mixtures to Encode Specific Subsets of Smino Acids for Semi-Random Mutagenesis." <i>Biotechnology (N Y)</i> . 1992 Mar;10(3):297-300.	
<input checked="" type="checkbox"/>	BZ	ARKIN "An algorithm for protein engineering: Simulations of recursive ensemble mutagenesis." <i>Proc Natl Acad Sci U S A</i> . 1992 Aug 15;89(16):7811-5.	
<input checked="" type="checkbox"/>	CA	BARLETT "Long-lasting gene repair." <i>Nature Biotechnology</i> 16:1312 (1998)	
<input checked="" type="checkbox"/>	CB	BOTSTEIN ET AL. "Strategies and Applications of in Vitro Mutagenesis." <i>Science</i> 229:1193-1201 (1985)	
<input checked="" type="checkbox"/>	CC	CARTER "Site-directed mutagenesis." <i>Biochem J</i> . 237:1-7 (1986)	
<input checked="" type="checkbox"/>	CD	CARTER "Improved Oligonucleotide-Directed Mutagenesis Using M13 Vectors." <i>Methods in Enzymol</i> 154:382-403 (1987)	
<input checked="" type="checkbox"/>	CE	CARTER "Improved oligonucleotide site-directed mutagenesis using M13 vectors." <i>Nucleic Acids Res</i> . 13:4431-4443 (1985)	
<input checked="" type="checkbox"/>	CF	CHEE ET AL. "Accessing Genetic Information with High-Density DNA Arrays." <i>Science</i> 274:610-614 (1996)	
<input checked="" type="checkbox"/>	CG	COLE-STRAUSS ET AL. "Correction of the Mutation Responsible for Sickie Cell Anemia by an RNA-DNA Oligonucleotide." <i>Science</i> 1386-1389 (1996)	
<input checked="" type="checkbox"/>	CH	DALE ET AL. "Oligonucleotide-directed Random Mutagenesis Using the Phosphorothioate Method." <i>Methods Mol. Biol.</i> 57:369-374 (1996)	
<input checked="" type="checkbox"/>	CI	DELAGRAVE "Searching Sequence Space to Engineer Proteins: Exponential Ensemble Mutagenesis." <i>Biotechnology (N Y)</i> . 1993 Dec;11(13):1548-52	
<input checked="" type="checkbox"/>	CJ	DELAGRAVE "Recursive ensemble mutagenesis." <i>Protein Eng.</i> 1993 Apr;6(3):327-31.	
<input checked="" type="checkbox"/>	CK	DELAGRAVE "Context dependence of phenotype prediction and diversity in combinatorial mutagenesis." <i>Protein Eng.</i> 1995 Mar;8(3):237-42.	
<input checked="" type="checkbox"/>	CL	Egea Biosciences, Inc. "Pathway to the Proteome"	
<input checked="" type="checkbox"/>	CM	FODOR ET AL. "Light-Directed, Spatially Addressable Parallel Chemical Synthesis." <i>Science</i> 251:767-777 (1991)	
<input checked="" type="checkbox"/>	CN	FODOR "Genome Analysis: Genome Technology." <i>FASEB Journal</i> 11:121 (1997)	
<input checked="" type="checkbox"/>	CO	FODOR "Massively Parallel Genomics." <i>Science</i> 227:393-395 (1997)	
<input checked="" type="checkbox"/>	CP	GOLDMAN "An Algrithmically Optimized Combinatorial Library Screened by Digital Imaging Spectroscopy." <i>Biotechnology (N Y)</i> . 1992 Dec;10(12):1557-61.	
<input checked="" type="checkbox"/>	CQ	HILL ET AL. "The structure of granulocyte-colony-stimulating factor and its relationship to other growth factors." <i>PNAS</i> 90:5167 (1993)	
<input checked="" type="checkbox"/>	CR	KACZOROWSKI ET AL. "Co-operatively of hexamer ligation." <i>Gene</i> 179(1):189-193 (1996)	
<input checked="" type="checkbox"/>	CS	KARLIN ET AL. "Applications and statistics for multiple high-scoring segments in molecular sequences." <i>PNAS USA</i> 90:5873-5787 (1993)	
<input checked="" type="checkbox"/>	CT	KAYUSHIN ET AL. "A convenient approach to the synthesis of trinucleotide phosphoroamidites-synthons for the generation of oligonucleotide/peptide libraries." <i>Nucleic Acids Res</i> . 24:3748-3755 (1996)	

Examiner Signature		Date Considered	4-29-03
--------------------	--	-----------------	---------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute for form 1449A-B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Complete if Known	
	Application Number	09/495,668
	Filing Date	February 1, 2000
	First Named Inventor	Sergey A. Selifonov
	Group Art Unit	1631
	Examiner Name	Kim, Y.
	Attorney Docket Number	02-109510US



RECEIVED

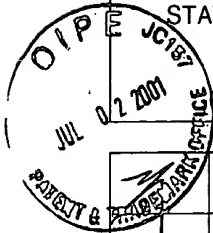
JUL 10 2001

TECH CENTER 1600/29

CU	KREN ET AL. "Targeted Nucleotide Exchange in the Alkaline Phosphates Gene of HuH-7 Cells Mediated by a Chimeric RNA/DNA Oligonucleotide." <i>Hepatology</i> 25(6):1462-1468 (1997)		
CV	KREN ET AL. "In Vivo site-directed mutagenesis of the factor IX gene by chimeric RNA/DNA oligonucleotides." <i>Nature Medicine</i> 4(3):285-290 (1998)		
CW	KUNKEL "The Efficiency of Oligonucleotide-Directed Mutagenesis." <i>Nucleic Acids &amp; Mol. Biol.</i> (1997)		
CX	LING ET AL. "Approaches to DNA Mutagenesis: An Overview." <i>Anal Biochem.</i> 254(2):157-178 (1997)		
CY	MEHLING ET AL. "Nucleotide sequences of streptomycete 16S ribosomal DNA: towards a specific identification system for streptomycetes using PCR." <i>Microbiology</i> 141:2139-2147 (1995)		
CZ	MINTZ ET AL. "EHD1-An EH-Domain-Containing Protein with a Specific Expression Pattern." <i>Genomics</i> 59(1):66-76 (1999)		
DA	MUERHOFF ET AL. "Identification of conserved nucleotide sequences within the GB virus c 5'-untranslated region: Design of PCR primers for detection of viral RNA." <i>J. Virological Methods</i> 62:55-62 (1996)		
DB	NAKAMAYE ET AL. "Inhibition of restriction endonuclease Nci I Cleavage by phosphorothioate groups and its applications to oligonucleotide-directed mutagenesis." <i>Nucleic Acids. Res.</i> 14:9679-9698 (1986)		
DC	NEEDLEMAN ET AL. "A General Method Applicable to the Search for Similarities in the Amino Acid Sequence of Two Proteins." <i>J. Mol. Biol.</i> 48:443 (1970)		
DD	PATHY "Modular exchange principles in proteins." <i>Curr Opinion in Structural Biology</i> 1:351-361 (1991)		
DE	PATHY "Introns and exons." <i>Curr. Opinion in Structural Biology</i> 4:383-392 (1994)		
DF	PEARSON ET AL. "Improved tools for biological sequence comparison." <i>PNAS</i> 85:2444 (1988)		
DG	PORTER ET AL. "Direct PCR Sequencing with boronated Nucleotides." <i>Nucleic Acids Res.</i> 25(8):1611-1617 (1997)		
DH	ROBLES "Hydropathy and Molar Volume Constraints on Combinatorial Mutants of the Photosynthetic Reaction Center." <i>J Mol Biol.</i> 1993 Jul 5;232(1):242-52.		
DI	SAYERS ET AL. "5'-3' Exonucleases in phosphorothioate-based oligonucleotide-directed mutagenesis." <i>Nucleic Acids Res.</i> 16:791-802(1988)		
DJ	SAYERS ET AL. "Strand specific cleavage of phosphorothioate-containing DNA by reaction with restriction endonucleases in the presence of ethidium bromide." <i>Nucleic Acids Res.</i> 16:803-814 (1988)		
DK	SINGH ET AL. "Application of Genetic Algorithms to Combinatorial Synthesis: A Computational Approach to Lead Identification and Lead Optimization." <i>J. Chem Inf. Comput. Sci</i> 118:1669-1679 (1996)		
DL	SMITH "In Vitro Mutagenesis." <i>Ann. Rev. Genet.</i> 19:423-462 (1985)		
DM	SMITH ET AL. "Comparison of Biosequences." <i>Adv. Appl. Math</i> 2:482 (1981)		
DN	STRAUSS "The Site-Specific Correction of Genetic Defects." <i>Nature Medicine</i> 4:274-275 (1998)		
Examiner Signature		Date Considered	4-29-03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute for form 1449A-B/PTO  INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (use as many sheets as necessary)	Complete if Known	
	Application Number	09/495,668
	Filing Date	February 1, 2000
	First Named Inventor	Serg y A. Selifonov
	Group Art Unit	1631
	Examiner Name	Kim, Y.
	Attorney Docket Number	02-109510US



DO	TAYLOR ET AL. "The use of phosphorothioate-modified DNA in restriction enzyme reactions to prepare nicked DNA." <i>Nucleic Acids Res.</i> 13:8749-8764 (1985)	
DP	TAYLOR ET AL. "The rapid generation of oligonucleotide-directed mutations at high frequency using phosphorothioate-modified DNA." <i>Nucleic Acids Res.</i> 13:8765-8787 (1985)	
DQ	VIRNEKAS ET AL. "Trinucleotide phosphoramidites: ideal reagents for the synthesis of mixed oligonucleotides for random mutagenesis." <i>Nucleic Acids Res.</i> 22:5600-5607 (1994)	
DR	VON DER OSTEN ET AL. "Protein engineering of subtilisins to improve stability in detergent formulations." <i>J. Biotechnol.</i> 28:55-68 (1993)	
DS	WELLS "Importance of hydrogen-bond formation in stabilizing the transition state of subtilisin." <i>Trans. R. Soc. Lond. A</i> 317:415-423 (1986)	
DT	XIANG ET AL. "Targeted gene conversion in a mammalian CD34+-enriched cell population using a chimeric RNA/DNA oligonucleotide." <i>J. Mol. Med.</i> 75:829-835 (1997)	
DU	YOON ET AL. "Targeted gene correction of episomal DNA in mammalian cells mediated by a chimeric RNA-DNA oligonucleotide." <i>PNAS</i> 93:2071-2076 (1996)	
DV	YOUVAN "Imaging Sequence Space." <i>Nature.</i> 1994 May 5;369(6475):79-80.	
DW	ZANG ET AL. "Directed evolution of a fucosidase from a galactosidase by DNA shuffling and screening." <i>PNAS USA</i> 94:4504-4509 (1997)	
DX	ZOLLER "New recombinant DNA methodology for protein engineering." <i>Curr. Opinion in Biotechnology</i> 3:348-354 (1992)	
DY	SUN "Modeling DNA Shuffline." <i>Pro. @nd. Inter. Conf Computational Molecular Biol.</i> 251-257 (1998)	

Examiner Signature		Date Considered	12-28-01
--------------------	--	-----------------	----------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.